

**TDMS No.** 99007 - 05  
**Test Type:** CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
**CAS Number:** GOLDENSEALRT

**Date Report Requested:** 08/15/2008  
**Time Report Requested:** 08:34:31  
**First Dose M/F:** 04/21/03 / 04/21/03  
**Lab:** SRI

F1\_R2

**C Number:** C99007B  
**Lock Date:** 08/07/2006  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.0.0





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DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	6	6	5	5	7	7	7	7	7	7	6	7	7	7	7	4	4	4	7	5	7	7	7	7	7	
		7	1	5	0	7	2	3	3	3	3	3	0	0	3	3	3	0	5	2	2	9	3	3	3	3	3	
		1	1	6	1	5	9	1	1	1	0	0	0	6	0	0	0	7	6	2	9	3	0	0	0	0	0	
<b>FISCHER 344 RATS MALE</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 PPM</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5		
		<b>males (cont...)</b>																										

Epithelium, Hyperplasia																											
.....																											
Tongue																											
Epithelium, Hyperplasia																											

**CARDIOVASCULAR SYSTEM**

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cardiomyopathy		1	1	2	3	2	1	3	1	3	2	1	1	3	1	1	3	1	1	3	1	3		3	3	
Thrombosis																										

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Accessory Adrenal Cortical Nodule					3					3				3						3	3			3	3		
Hyperplasia	3	3						2					2			2					1			2			
Hyperplasia, Focal																											
Hypertrophy, Focal		2									1																
Necrosis																											
Vacuolization Cytoplasmic, Focal																1											
.....																											
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia											2																
.....																											
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia																											

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	6	6	5	5	7	7	7	7	7	7	6	7	7	7	7	4	4	4	7	5	7	7	7	7	7	
	7	1	5	0	7	2	3	3	3	3	3	3	0	0	3	3	3	0	5	2	2	9	3	3	3	3	
	1	1	6	1	5	9	1	1	1	0	0	0	0	6	0	0	0	7	6	2	9	3	0	0	0	0	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	
																										<b>males (cont...)</b>	

Parathyroid Gland	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Angiectasis																										2
Pars Distalis, Cyst																										
Pars Distalis, Hemorrhage, Chronic																										
Pars Distalis, Hyperplasia, Focal			3												1		1						1			2
Pars Intermedia, Cyst															X								X			
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Hyperplasia	1			1							2						1								3	
Follicle, Cyst				X																						

**GENERAL BODY SYSTEM**  
NONE

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Granuloma Sperm																										
Inflammation, Chronic																										3
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst			X																							
Hyperplasia																										
Hyperplasia, Focal																										
Inflammation, Chronic										2		2		2		2						2		2		2

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DAY ON TEST	Animals																								
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	6	6	5	5	7	7	7	7	7	7	7	6	7	7	7	7	4	4	4	7	5	7	7	7
	7	1	5	0	7	2	3	3	3	3	3	3	0	0	3	3	3	0	5	2	2	9	3	3	3
	1	1	6	1	5	9	1	1	1	0	0	0	0	6	0	0	0	7	6	2	9	3	0	0	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>0 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

males  
(cont...)

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Compression														3						3				
Hemorrhage																				3	3			
Necrosis					2																			
Peripheral Nerve														+									+	+
Spinal Cord														+									+	+

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																								
Emphysema																								
Hemorrhage																							2	
Infiltration Cellular, Histiocyte				1		1	1	1	1	3	1			1	1	1	3			1	1	1	1	1
Inflammation, Chronic					2			2		3							3					1		2
Metaplasia, Osseous							1			1		1			2									
Alveolar Epithelium, Hyperplasia						3									2								1	1
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Foreign Body		X								X			X											X
Inflammation, Chronic		2			1	1				1										1	1			1
Respiratory Epithelium, Hyperplasia		2				1																		

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DAY ON TEST	0																									* TOTALS
	7	7	7	7	5	7	7	7	5	5	7	7	7	7	7	7	7	7	6	7	7	7	7	7		
	3	3	3	3	8	3	3	3	6	6	3	1	3	3	3	3	3	3	6	2	2	2	3	1		
	0	0	0	0	3	0	0	0	1	3	1	1	0	0	0	0	0	0	3	9	9	9	0	6		
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0 PPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5		
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
Necrosis, Focal									3																	
Bile Duct, Hyperplasia	2	1	1	2	3	1		2		1	1	2	1	3		3	1	2	2	3	1	1	3	2	3	
Hepatocyte, Hyperplasia, Focal																2										
Hepatocyte, Vacuolization Cytoplasmic																			3		2					
Kupffer Cell, Pigmentation																										
Mesentery																										
Accessory Spleen																										
Inflammation, Chronic																										
Fat, Necrosis																										
Oral Mucosa																										
Pancreas																										
Atrophy	3		2					2	1					1												
Cyst	X	X																								
Acinus, Cytoplasmic Alteration																										
Acinus, Hyperplasia, Focal																										
Salivary Glands																										
Atrophy																										
Stomach, Forestomach																										
Edema																										
Ulcer																										
Epithelium, Hyperplasia																										
Stomach, Glandular																										
Erosion																										

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DAY ON TEST	0 0																								* TOTALS
	7	7	7	7	5	7	7	7	5	5	7	7	7	7	7	7	7	7	7	6	7	7	7	7	
	3	3	3	3	8	3	3	3	6	6	3	1	3	3	3	3	3	3	3	6	2	2	2	3	1
	0	0	0	0	3	0	0	0	1	3	1	1	0	0	0	0	0	0	0	3	9	9	9	0	6
FISCHER 344 RATS MALE	0 0																								* TOTALS
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0 PPM	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Pars Distalis, Angiectasis																								2	2 2.0
Pars Distalis, Cyst		X		X			X			X			X							X		X			7 1.0
Pars Distalis, Hemorrhage, Chronic												1													1 1.0
Pars Distalis, Hyperplasia, Focal		1									1	2	3	3		1				2		1	3		14 1.8
Pars Intermedia, Cyst		X																							3
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
C-cell, Hyperplasia														1					1					1	8 1.4
Follicle, Cyst																X			X						3

**GENERAL BODY SYSTEM**  
 NONE

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Granuloma Sperm							3																		1 3.0
Inflammation, Chronic																									1 3.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Cyst												X													2
Hyperplasia															2				1						2 1.5
Hyperplasia, Focal																							2		1 2.0
Inflammation, Chronic	2	3	2				2							3	2		2	2	2				2	2	19 2.1

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DAY ON TEST	0																								* TOTALS
	7																								
FISCHER 344 RATS MALE ANIMAL ID	3																								* TOTALS
	0																								
0 PPM	2																								* TOTALS
	6																								

Hyperplasia, Lymphoid																									3	3	4	3.0
Spleen	+																										49	
Fibrosis																											1	3.0
Hematopoietic Cell Proliferation																											2	3.0
Thymus	M	+																									48	
Hyperplasia, Lymphoid		3																									1	3.0

**INTEGUMENTARY SYSTEM**

Mammary Gland	+																										50	
Hyperplasia																											2	2
Skin	+																										50	
Cyst Epithelial Inclusion																											1	
Hyperkeratosis																									3	2	4	3.0
Inflammation, Chronic																									2		3	2.5
Ulcer																											1	4.0
Epidermis, Hyperplasia																									3	2	5	2.6

**MUSCULOSKELETAL SYSTEM**

Bone	+																										50	
Skeletal Muscle																											3	
Atrophy																											1	2.0

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	7	7	7	7	5	7	7	7	5	5	7	7	7	7	7	7	7	7	6	7	7	7	7	0
	3	3	3	3	8	3	3	3	6	6	3	1	3	3	3	3	3	3	6	2	2	2	3	1
	0	0	0	0	3	0	0	0	1	3	1	1	0	0	0	0	0	0	3	9	9	9	0	6
FISCHER 344 RATS MALE																							* TOTALS	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
0 PPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Compression																												2 3.0
Hemorrhage																												2 3.0
Necrosis																												1 2.0
Peripheral Nerve																												4
Spinal Cord																												4

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Cyst																												1
Emphysema	2																											1 2.0
Hemorrhage																												1 2.0
Infiltration Cellular, Histiocyte	2	1		1		1	1	1	2	1	1	1	1	1				1	1		1	1	1	1	2		34 1.2	
Inflammation, Chronic		1	1			2	1					1	2					1	1		3	1					16 1.7	
Metaplasia, Osseous												1																5 1.2
Alveolar Epithelium, Hyperplasia	1						3									1					2						8 1.8	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Foreign Body																												6
Inflammation, Chronic				1																							1	12 1.3
Respiratory Epithelium, Hyperplasia																											1	5 1.4

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7	7	7	7	5	7	7	7	5	5	7	7	7	7	7	7	7	7	7	6	7	7	7	7	7		
	3	3	3	3	8	3	3	3	6	6	3	1	3	3	3	3	3	3	6	2	2	2	3	1			
	0	0	0	0	3	0	0	0	1	3	1	1	0	0	0	0	0	0	3	9	9	9	0	6			
.....																											
<b>FISCHER 344 RATS MALE</b> ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5		
0 PPM	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0		
																											<b>* TOTALS</b>

Respiratory Epithelium, Metaplasia, Squamous 1 1 **2 1.0**

Trachea + **50**

**SPECIAL SENSES SYSTEM**

Eye + **50**  
 Cataract 3 **2 3.0**  
 Retina, Degeneration 4 **2 3.5**

Harderian Gland + **50**  
 Hyperplasia, Focal 1 **1 1.0**

**URINARY SYSTEM**

Kidney + **50**  
 Inflammation, Suppurative 1 **1 1.0**  
 Nephropathy 1 1 1 1 1 1 1 1 1 3 2 1 1 2 1 1 1 1 1 1 1 1 **46 1.2**  
 Renal Tubule, Accumulation, Hyaline Droplet 4 **2 3.5**  
 Renal Tubule, Necrosis 1 **1 1.0**  
 Renal Tubule, Pigmentation 4 **3 2.7**

Urinary Bladder + **50**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
 Page 17

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		5	5	7	6	6	6	7	7	7	5	7	5	6	7	3	7	7	7	7	6	7	6	7	7	6	7	7	6	
		0	6	3	9	4	5	2	2	2	3	3	7	3	2	5	3	3	3	3	7	3	4	3	3	3	8			
		6	5	0	6	5	6	9	9	9	0	1	6	2	9	5	0	0	0	0	8	0	2	1	1	4				
<b>FISCHER 344 RATS MALE</b> <b>3000 PPM</b>	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5				<b>males (cont...)</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Intestine Large, Cecum Edema	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																													
Basophilic Focus			X	X			X	X	X		X	X		X	X		X	X	X	X		X	X		X	X			
Clear Cell Focus								X	X		X					X		X	X				X	X					
Degeneration, Cystic																													
Eosinophilic Focus				X		X															1							3	
Hematopoietic Cell Proliferation																1					X				X				
Hemorrhage	4									2																			
Hepatodiaphragmatic Nodule				X		X						X	X											X					
Infiltration Cellular, Mixed Cell										1										1		1							

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue

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 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
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 2) Mild 4) Marked

Page 18

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																									males (cont...)
	5 5 7 6 6 6 7 7 7 5 7 5 6 7 3 7 7 7 7 6 7 6 7 7 6																									
FISCHER 344 RATS MALE 3000 PPM ANIMAL ID	0 0																									
	0 0																									
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	
Mixed Cell Focus			X	X			X	X	X		X								X		X					
Necrosis, Focal																										
Bile Duct, Hyperplasia		2	1	1	1	1		1	1		1		1	1	3	1	2	2		2		2	1	2	3	
Centrilobular, Necrosis	4																									
Hepatocyte, Degeneration			1	1			1	1	1									1	1			1	1			
Hepatocyte, Hypertrophy									1		1							1	1	2			1			
Hepatocyte, Vacuolization Cytoplasmic															3										3	
Mesentery																										
Fat, Necrosis	4			3										2					3						+	
Pancreas		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Atrophy					2														2	2		3	2	1	2	4
Cyst				X							X	X									X	X	X			
Acinus, Cytoplasmic Alteration											3															
Salivary Glands		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Atrophy																		2								
Stomach, Forestomach		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Edema						2																				
Erosion						1																				
Inflammation, Chronic Active																									3	
Ulcer											3	3		3											3	
Epithelium, Hyperplasia			1								2	3													3	
Stomach, Glandular		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Erosion						1																				
Ulcer											3								3						3	

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

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 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	7	6	6	6	7	7	7	5	7	5	6	7	3	7	7	7	7	6	7	6	7	7	6	6
FISCHER 344 RATS MALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3000 PPM	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	
ANIMAL ID																										

males  
(cont...)

Tongue +

**CARDIOVASCULAR SYSTEM**

Blood Vessel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cardiomyopathy	3	1	2	1	2		3	3	1	1		1		1	1		2	3	3	1	3		3	3	2	

**ENDOCRINE SYSTEM**

Adrenal Cortex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accessory Adrenal Cortical Nodule																										
Degeneration, Fatty							3										3		3							
Hyperplasia																								2		
Hyperplasia, Focal											1															
Hypertrophy, Focal																										
Vacuolization Cytoplasmic, Focal									2		1															
Vacuolization Cytoplasmic, Diffuse														3												
Adrenal Medulla																										
Hyperplasia							2										1								1	
Islets, Pancreatic																										
Hyperplasia																										

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 Page 20

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	7	6	6	6	7	7	7	5	7	5	6	7	3	7	7	7	7	6	7	6	7	7	6
	0	6	3	9	4	5	2	2	2	3	3	7	3	2	5	3	3	3	3	7	3	4	3	3	8
	6	5	0	6	5	6	9	9	9	0	1	6	2	9	5	0	0	0	0	8	0	2	1	1	4
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

males  
(cont...)

Parathyroid Gland	+	M	+	+	+	+	+	+	+	+	+	+	+	M	+	M	+	+	+	+	+	+	+	+	+
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Angiectasis									1					4											
Pars Distalis, Hyperplasia, Focal									2								3		2						
Pars Intermedia, Cyst																				X					
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Hyperplasia		1							2																
Follicle, Cyst																									

**GENERAL BODY SYSTEM**

Tissue NOS	+
Hemorrhage	3

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Acute																									
Inflammation, Chronic																						2			
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																									
Hyperplasia, Focal																									
Inflammation, Chronic											2	3											2	3	2

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 + .. Tissue examined microscopically  
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	DAY ON TEST																									males (cont...)
	0 5	0 5	0 7	0 6	0 6	0 6	0 7	0 7	0 7	0 5	0 7	0 5	0 6	0 7	0 3	0 7	0 7	0 7	0 7	0 6	0 7	0 6	0 7	0 7	0 6	
	0 6	0 5	0 3	0 9	0 4	0 5	0 2	0 2	0 2	0 3	0 3	0 7	0 3	0 2	0 5	0 3	0 3	0 3	0 3	0 7	0 3	0 4	0 3	0 3	0 8	
	6	5	0	6	5	6	9	9	9	0	1	6	2	9	5	0	0	0	0	8	0	2	1	1	4	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	
<b>ANIMAL ID</b>	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Prostate Inflammation, Chronic Epithelium, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
											3								2	3				4	
												1													
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes Germinal Epithelium, Atrophy Interstitial Cell, Hyperplasia	+	+	+	+	+	+	+	+	+	+	2	+	+	+	+	+	+	+	+	+	+	+	+	+	+
						2												4				1		3	1

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia Myelofibrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
											4												2		2
Lymph Node Mediastinal, Hemorrhage Mediastinal, Hyperplasia, Lymphoid Mediastinal, Pigmentation Pancreatic, Ectasia Pancreatic, Hyperplasia, Lymphoid				+					+			+											+		
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Lymph Node, Mesenteric Ectasia Hemorrhage	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																								2	

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

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 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	7	6	6	6	7	7	7	5	7	5	6	7	3	7	7	7	7	6	7	6	7	7	6	7	6
	0	6	3	9	4	5	2	2	2	3	3	7	3	2	5	3	3	3	3	7	3	4	3	3	8		
	6	5	0	6	5	6	9	9	9	0	1	6	2	9	5	0	0	0	0	8	0	2	1	1	4		

---

FISCHER 344 RATS MALE 3000 PPM ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5			

**males (cont...)**

Hyperplasia, Lymphoid Infiltration Cellular, Mixed Cell	2											2								2								
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Accessory Spleen			X																									
Fibrosis																												
Hematopoietic Cell Proliferation					2	2							1						2		1		2					
Infiltration Cellular, Mixed Cell																		2										
Metaplasia, Lipocyte																												
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	
Cyst											X																	
Fibrosis																												
Epithelial Cell, Hyperplasia																												

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia													3			2				3								
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst Epithelial Inclusion			X																									
Edema				2																								
Hyperkeratosis	4														3													

**MUSCULOSKELETAL SYSTEM**

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 Test Type: CHRONIC  
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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
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Date Report Requested: 08/15/2008  
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 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								
	5 5 7 6 6 6 7 7 7 5 7 5 6 7 3 7 7 7 7 6 7 6 7 7 6																								
FISCHER 344 RATS MALE 3000 PPM ANIMAL ID	0 0																								
	0 0																								
	5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6																								
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																								
	<b>males (cont...)</b>																								

Bone +

Skeletal Muscle +

**NERVOUS SYSTEM**

Brain +  
 Angiectasis  
 Compression 3 3  
 Hemorrhage 3  
 Necrosis 2

Peripheral Nerve + + +

Spinal Cord + + +

**RESPIRATORY SYSTEM**

Lung +  
 Foreign Body  
 Hemorrhage 2 2 3 2  
 Infiltration Cellular, Histiocyte 3 1 1 3 1 1 3 1 1 1 1  
 Inflammation, Suppurative 2  
 Inflammation, Chronic 1 1 1 1 1 1 1  
 Metaplasia, Osseous 1 1  
 Alveolar Epithelium, Hyperplasia 1

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked









TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								* TOTALS	
	7 7 7 5 7 5 7 7 7 7 7 7 7 7 7 6 7 4 6 7 7 5 6 3 3 1 1 2 6 2 2 2 2 2 3 2 3 3 3 3 6 3 3 6 3 3 0 4 1 1 1 7 9 3 9 9 9 9 9 1 3 1 1 1 1 3 0 7 6 1 1 9 9																									
FISCHER 344 RATS MALE 3000 PPM ANIMAL ID	0 0																									
	0 0																									
	0 0																									
	7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9																									
Mixed Cell Focus	X				X		X	X		X	X	X		X	X	X		X		X	X				21	
Necrosis, Focal																									1	2 2.0
Bile Duct, Hyperplasia	1	3	3	1	1		1	2	1	2	1	1		1	2	1		1	2		3	1		1	38 1.5	
Centrilobular, Necrosis				2																						2 3.0
Hepatocyte, Degeneration	1				1			1	1	1	1	1		1		1	1		1			2	2		22 1.1	
Hepatocyte, Hypertrophy	2				2		1	2	1	1	2	1		1	2	1						1	2		19 1.4	
Hepatocyte, Vacuolization Cytoplasmic						4												3							4 3.3	
Mesentery																									9	5 2.8
Fat, Necrosis																									2	
Pancreas																										50
Atrophy																										19 2.2
Cyst	X																								12	
Acinus, Cytoplasmic Alteration																									3	3 3.0
Salivary Glands																										49
Atrophy																										2 1.5
Stomach, Forestomach																										50
Edema																										5 3.0
Erosion																										1 1.0
Inflammation, Chronic Active																										1 3.0
Ulcer																										8 3.5
Epithelium, Hyperplasia																										7 2.4
Stomach, Glandular																										50
Erosion																										2 2.0
Ulcer																										3 2.7

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 2) Mild 4) Marked











TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	5	7	5	7	7	7	7	7	7	7	7	7	7	6	7	4	6	7	7	5	6				
	3	3	1	1	2	6	2	2	2	2	2	3	2	3	3	3	6	3	3	6	3	3	0	4				
	1	1	1	7	9	3	9	9	9	9	9	1	3	1	1	1	3	0	7	6	1	1	9	9				
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0			
																											<b>* TOTALS</b>	

Bone + 50

Skeletal Muscle 1

**NERVOUS SYSTEM**

Brain + 50

Angiectasis																											<b>1 2.0</b>
Compression	2	2			4							2			4	4		4	2								<b>10 3.0</b>
Hemorrhage												3				1											<b>4 2.5</b>
Necrosis												3						2				3					<b>4 2.5</b>

Peripheral Nerve 3

Spinal Cord 3

**RESPIRATORY SYSTEM**

Lung + 50

Foreign Body																							X				<b>1</b>
Hemorrhage																											<b>4 2.3</b>
Infiltration Cellular, Histiocyte	2	1	1			1			1	1	1			1	1	1			1	1				1			<b>24 1.3</b>
Inflammation, Suppurative																											<b>1 2.0</b>
Inflammation, Chronic								1	1												1	3					<b>10 1.2</b>
Metaplasia, Osseous						1																					<b>3 1.0</b>
Alveolar Epithelium, Hyperplasia		1													2												<b>3 1.3</b>

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 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
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 BLANK .. Not examined microscopically  
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 2) Mild 4) Marked

TDMS No. 99007 - 05  
Test Type: CHRONIC  
Route: DOSED FEED  
Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Goldenseal root powder  
CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
Time Report Requested: 08:34:31  
First Dose M/F: 04/21/03 / 04/21/03  
Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	5	7	5	7	7	7	7	7	7	7	7	7	7	6	7	4	6	7	7	5	6			
	3	3	1	1	2	6	2	2	2	2	2	3	2	3	3	3	6	3	3	6	3	3	0	4			
	1	1	1	7	9	3	9	9	9	9	9	1	3	1	1	1	3	0	7	6	1	1	9	9			
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0		<b>* TOTALS</b>

Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Foreign Body				X																X							5
Inflammation, Chronic																											4 1.0
Respiratory Epithelium, Hyperplasia	1																				1						3 1.0
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Inflammation, Chronic																											1 4.0
Retina, Degeneration			2	2																				3			3 2.3
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Inflammation, Chronic															2												1 2.0

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Cyst						X																					2
Nephropathy	2	3	1	1	1	4	1	2	2	1	1	1	1	1	1	1	3	2	1	1	1	2	1	1		49 1.4	
Renal Tubule, Necrosis																				3							1 3.0
Renal Tubule, Pigmentation																											1 3.0
Transitional Epithelium, Hyperplasia														2													2 2.0
Urethra																									1		
Angiectasis																											1 3.0

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								
	7 7 7 3 7 7 7 7 6 5 5 4 6 7 6 7 7 7 7 7 7 5 7 7 7																								
FISCHER 344 RATS MALE 9000 PPM	3 3 3 1 2 3 3 3 9 9 5 3 4 3 9 3 3 0 2 2 2 3 2 2 3																								
	0 0 0 6 4 0 0 0 6 4 6 1 4 0 6 0 0 9 9 9 9 4 9 9 1																								
ANIMAL ID	0 0																								
	0 0																								
9000 PPM	1 1																								
	0 0																								
																									males (cont...)
																									1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5

ALIMENTARY SYSTEM

Esophagus	+ +																								
Intestine Large, Cecum Edema	+ +																								
Intestine Large, Colon	+ +																								
Intestine Large, Rectum	+ +																								
Intestine Small, Duodenum	+ + + + + + + + + + A + + + + + + + + + + + + + + +																								
Intestine Small, Ileum	+ + + A + + + + + A + + + + + + + + + + + + + + + +																								
Intestine Small, Jejunum	+ + + A +																								
Liver	+ +																								
Angiectasis																									
Basophilic Focus	X X																								
Clear Cell Focus	X X																								
Degeneration, Cystic	2 1																								
Eosinophilic Focus	X X																								
Hepatodiaphragmatic Nodule	X X																								
Infiltration Cellular, Mixed Cell	4 1 1																								
Mixed Cell Focus	X X																								
Necrosis, Focal	3																								

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder  
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 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																									males (cont...)
	7 7 7 3 7 7 7 7 6 5 5 4 6 7 6 7 7 7 7 7 7 5 7 7 7																									
FISCHER 344 RATS MALE 9000 PPM ANIMAL ID	3 3 3 1 2 3 3 3 9 9 5 3 4 3 9 3 3 0 2 2 2 3 2 2 3																									
	0 0 0 6 4 0 0 0 6 4 6 1 4 0 6 0 0 9 9 9 9 4 9 9 1																									
0 0																									males (cont...)	
1 1																										
0 0																										
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 2 3 4 5																										
Bile Duct, Hyperplasia	1	1	1		1	1	1	1	3		1	3	2	4	3	1	1	2	1	1	1	1	2	1		
Hepatocyte, Degeneration				2		1	1	1			1					1	2		1	2	2		3	2	3	
Hepatocyte, Hypertrophy	2		3			2	1	1			2					2	2		3	2	1		4	2	3	
Hepatocyte, Vacuolization Cytoplasmic																										
Kupffer Cell, Pigmentation					2																					
Mesentery										+									+	+	+			+		
Accessory Spleen																										
Angiectasis																									3	
Hemorrhage																			3	2						
Fat, Necrosis									2										4	2					3	
Pancreas																										
Atrophy		+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cyst		2	1					2																		
Necrosis		X	X		X	X									X	X		X				X		X	X	
Acinus, Hyperplasia, Focal					3																					
Salivary Glands																										
Atrophy		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Infiltration Cellular, Polymorphonuclear		1						1														2				
Stomach, Forestomach																										
Edema						+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia, Squamous					3										3											
Inflammation, Chronic Active																										
Perforation						X																				
Ulcer															4											
Epithelium, Hyperplasia					3										2						3					

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	FISCHER 344 RATS MALE																									males (cont...)
	ANIMAL ID																									
9000 PPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	3	7	7	7	7	6	5	5	4	6	7	6	7	7	7	7	7	7	5	7	7	7	
	3	3	3	1	2	3	3	3	9	9	5	3	4	3	9	3	3	0	2	2	2	3	2	2	3	
	0	0	0	6	4	0	0	0	6	4	6	1	4	0	6	0	0	9	9	9	9	4	9	9	1	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary Gland	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Angiectasis						3																		
Pars Distalis, Cyst							X		X				X											X
Pars Distalis, Hyperplasia, Focal		1				3												1				2		
Pars Intermedia, Cyst																								X
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ultimobranchial Cyst																		X						
C-cell, Hyperplasia						1							1											
Follicle, Cyst															X									

**GENERAL BODY SYSTEM**

Tissue NOS	+
------------	---

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Acute																								
Inflammation, Chronic		2									2											2		
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cyst																							X	
Hyperplasia							1																	
Inflammation, Chronic		2	2							3				2		3	2	2	2					

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TDMS No. 99007 - 05  
Test Type: CHRONIC  
Route: DOSED FEED  
Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
Goldenseal root powder  
CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
Time Report Requested: 08:34:31  
First Dose M/F: 04/21/03 / 04/21/03  
Lab: SRI

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FISCHER 344 RATS MALE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9000 PPM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	2	3	4	5	males (cont...)

Prostate Inflammation, Chronic Epithelium, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			2						2			1		2				2	2	2	1		2			
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes Germinal Epithelium, Atrophy Interstitial Cell, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			2								1															

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia Infiltration Cellular, Histiocyte	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			3						4					2												
Lymph Node Mediastinal, Ectasia Mediastinal, Hemorrhage Mediastinal, Hyperplasia, Lymphoid Pancreatic, Ectasia Pancreatic, Hemorrhage		+		+	+				+	+				+	+					+					+	
		3																								
Lymph Node, Mandibular	M	M	+	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Lymph Node, Mesenteric Ectasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
								2																		1

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+ .. Tissue examined microscopically  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								
	7 7 7 3 7 7 7 7 6 5 5 4 6 7 6 7 7 7 7 7 5 7 7 7 7																								
FISCHER 344 RATS MALE 9000 PPM	3 3 3 1 2 3 3 3 9 9 5 3 4 3 9 3 3 0 2 2 2 3 2 2 3																								
	0 0 0 6 4 0 0 0 6 4 6 1 4 0 6 0 0 9 9 9 9 4 9 9 1																								
ANIMAL ID	0 0																								
	0 0																								
9000 PPM	1 1																								
	0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2																								
																									males (cont...)
																									1

Foreign Body													X													X
Inflammation, Chronic													1													
Respiratory Epithelium, Hyperplasia																										
Trachea	+ +																									

SPECIAL SENSES SYSTEM

Eye	+ +																									
Retina, Degeneration																										
Harderian Gland	+ +																									
Hyperplasia, Focal																										
																										1

URINARY SYSTEM

Kidney	+ +																											
Infarct																										2		
Nephropathy	1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 2 2 1 1 1 1 1																											
Renal Tubule, Necrosis																										4		
Renal Tubule, Pigmentation																										2	3	3
Urinary Bladder	+ +																											

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
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 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0																								* TOTALS	
	7	7	7	5	7	7	6	7	6	6	7	7	7	7	7	6	7	7	6	7	6	7	7	6		
	3	3	0	6	0	3	3	3	4	6	2	2	2	2	3	3	9	2	2	1	2	8	2	3	5	
	1	1	3	3	1	0	5	0	9	3	9	9	9	9	0	0	0	9	9	8	9	8	9	1	9	
FISCHER 344 RATS MALE 9000 PPM ANIMAL ID	0																								* TOTALS	
	0																									
	1																									
	2																									
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	4	5	6	7	8	9	0
Bile Duct, Hyperplasia	1	2	3		3	2	2	2	2	4	1	1	1	1	1	1	2	1	1		1	2	1	1	45	
Hepatocyte, Degeneration		2			1	2		1			2	2	2	2	2	3	1	2	2	1	2		2	2	30	
Hepatocyte, Hypertrophy	1	2		2				2			1	1	2	1	1	1	1	2	3	2	2		2	3	31	
Hepatocyte, Vacuolization Cytoplasmic					3															3					2	
Kupffer Cell, Pigmentation							2																		2	
Mesentery		+		+		+		+		+							+								11	
Accessory Spleen						X																			1	
Angiectasis																									1	
Hemorrhage																									2	
Fat, Necrosis		3		4							1														7	
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Atrophy		2	2	1		1	1					2	3	2	1	2		1	1	3	2		2	1	2	
Cyst						X	X				X			X					X						15	
Necrosis																									1	
Acinus, Hyperplasia, Focal	3													2									2		5	
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Atrophy																								3	4	
Infiltration Cellular, Polymorphonuclear																								2	1	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Edema																									2	
Hyperplasia, Squamous							2																		1	
Inflammation, Chronic Active									4																1	
Perforation																									1	
Ulcer									3																2	
Epithelium, Hyperplasia																									3	

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	5	7	7	6	7	6	6	7	7	7	7	7	6	7	7	6	7	6	7	7	6	7	7	6	
	3	3	0	6	0	3	3	3	4	6	2	2	2	2	3	3	9	2	2	1	2	8	2	3	5			
	1	1	3	3	1	0	5	0	9	3	9	9	9	9	0	0	0	9	9	8	9	8	9	1	9			
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>9000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5		
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0			
																											<b>* TOTALS</b>	

Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	M	+	+	+	+	+	+	+	+	+	48	
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Pars Distalis, Angiectasis																												2	2 2.5
Pars Distalis, Cyst											X								X									6	6
Pars Distalis, Hyperplasia, Focal																	2		1					1				8	1.6
Pars Intermedia, Cyst																										X		2	2
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Ultimobranchial Cyst																												1	1
C-cell, Hyperplasia																												4	1.5
Follicle, Cyst																												1	1

**GENERAL BODY SYSTEM**

Tissue NOS																													1
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Inflammation, Acute																													3	1 3.0
Inflammation, Chronic																													3	2.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Cyst																													3	3
Hyperplasia																													2	1.5
Inflammation, Chronic																													2	2.2

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 Page 47





TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FISCHER 344 RATS MALE		7	7	7	5	7	7	6	7	6	6	7	7	7	7	7	6	7	7	6	7	6	7	7	6	
9000 PPM		3	3	0	6	0	3	3	3	4	6	2	2	2	2	3	3	9	2	2	1	2	8	2	3	5
ANIMAL ID		1	1	3	3	1	0	5	0	9	3	9	9	9	9	0	0	0	9	9	8	9	8	9	1	9

Hemorrhage																										<b>2 1.5</b>
Hyperplasia, Lymphoid	2							2									2	2	2	2						<b>9 2.0</b>
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>49</b>
Fibrosis																3										<b>1 3.0</b>
Hematopoietic Cell Proliferation								3	2																	<b>4 2.3</b>
Hemorrhage																										<b>1 3.0</b>
Hyperplasia, Lymphoid	2																									<b>2 2.5</b>
Infiltration Cellular, Mixed Cell																										<b>1 4.0</b>
Necrosis			4																							<b>3 4.0</b>
Thymus	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>49</b>

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Hyperplasia	1				4												4								1	<b>6 2.2</b>
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Cyst Epithelial Inclusion																X										<b>2</b>
Hyperkeratosis																		3					3	4		<b>4 3.5</b>
Inflammation, Chronic																								2		<b>2 2.0</b>
Ulcer																										<b>1 4.0</b>
Epidermis, Hyperplasia																	3						2	3		<b>4 2.8</b>

**MUSCULOSKELETAL SYSTEM**

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 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
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 1-4 .. Lesion qualified as:  
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 2) Mild 4) Marked  
 Page 49





TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5	
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0	
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

males  
(cont...)

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum Edema	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	3	+	+	+	+	+	3
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum Inflammation, Chronic	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basophilic Focus												X								X		X	X	
Clear Cell Focus																								
Degeneration, Cystic						2																		1
Eosinophilic Focus		X	X	X					X			X	X	X		X		X	X			X	X	
Hepatodiaphragmatic Nodule																								
Infarct																								
Infiltration Cellular, Mixed Cell																		2					2	
Mixed Cell Focus	X															X								

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TDMS No. 99007 - 05

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008

Time Report Requested: 08:34:31

First Dose M/F: 04/21/03 / 04/21/03

Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
																									<b>males (cont...)</b>
Necrosis, Focal																									
Bile Duct, Hyperplasia	1	2	1	2	3		3	3			3		2	4	3	3			3	1	1	3	1	3	4
Centrilobular, Necrosis																									
Hepatocyte, Degeneration	2	2	3											3	1	1	2			3	2		3		
Hepatocyte, Hypertrophy	3	2	4	1					4			1	4	3	3					2		4	2		
Hepatocyte, Vacuolization Cytoplasmic										4															
Kupffer Cell, Pigmentation																									
Mesentery									+	+								+				+			
Accessory Spleen																									
Fat, Necrosis																			2					4	
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Atrophy					3				2	1				2	3	2	3							1	
Cyst			X	X							X				X					X	X			X	X
Acinus, Cytoplasmic Alteration						3																			
Acinus, Hyperplasia, Focal																								3	
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Atrophy														1									1		
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Edema																									
Ulcer																									3
Epithelium, Hyperplasia																									3
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Erosion																									3
																									1

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x .. Lesion present

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M .. Missing tissue

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BLANK .. Not examined microscopically

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
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 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	Animals																									males (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5	0	
3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0	0	
5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9	0	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

**CARDIOVASCULAR SYSTEM**

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cardiomyopathy	3	2	2	2	1	1		1		1	1	2	2	1	3			2	3		1			+
Thrombosis																								

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Accessory Adrenal Cortical Nodule	3	3		3	3			3				3					3							
Hyperplasia				2																		1		
Hyperplasia, Focal										1														
Hypertrophy, Focal																							2	
Necrosis										3														
Vacuolization Cytoplasmic, Focal			1															1						
Vacuolization Cytoplasmic, Diffuse										3														
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia								1	2											1			1	
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid Gland	+	+	+	+	+	+	M	+	+	+	+	+	I	+	+	+	+	+	+	+	+	+	+	+
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Angiectasis			3															2						
Pars Distalis, Cyst								X	X	X														

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
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 BLANK .. Not examined microscopically  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

males (cont...)

Pars Distalis, Hyperplasia, Focal					1	2				3				1						2					
Pars Intermedia, Cyst						X																			
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ultimobranchial Cyst											X														
C-cell, Hyperplasia					1									2						2					
Follicle, Cyst							X			X															
Follicular Cell, Hyperplasia										2															

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Granuloma Sperm					2																				
Inflammation, Chronic																									2
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia																									
Inflammation, Chronic			2		2	2		2			2			2			2			2			2		3
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis							3																		
Inflammation, Acute							3																		
Inflammation, Chronic				1						2		4	2				2			2					2

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 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

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 Lab: SRI

DAY ON TEST	ANIMAL ID																										males (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5	7	5
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0	0	0
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9	0	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	5	

Seminal Vesicle Inflammation, Chronic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																										3
Testes Germinal Epithelium, Atrophy Interstitial Cell, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
								1						2			4									2

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia Myelofibrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	2	3								3			4					3								
Lymph Node Mediastinal, Ectasia Mediastinal, Hemorrhage Mediastinal, Hyperplasia, Lymphoid Mediastinal, Pigmentation Pancreatic, Ectasia Pancreatic, Hemorrhage Pancreatic, Hyperplasia, Lymphoid		+		+					+		+			+		+		+		+		+			+	
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Lymph Node, Mesenteric Atrophy Ectasia Hemorrhage	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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 Page 56



TDMS No. 99007 - 05  
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Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

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Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

**males  
(cont...)**

Hyperplasia, Lymphoid	2	2			2			3							2										
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosis																									
Hematopoietic Cell Proliferation							1	1		1	1				1										
Hemorrhage										3															
Hyperplasia, Lymphoid										4															
Necrosis																									
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+
Atrophy				3		2																			

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia				1		2				3															1
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst Epithelial Inclusion																									
Hyperkeratosis				3																					
Ulcer																									

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fracture																									

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 Test Type: CHRONIC  
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 Lab: SRI

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5
		3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0
		5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9
<b>FISCHER 344 RATS MALE</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

males  
(cont...)

Skeletal Muscle Atrophy + 1 +

**NERVOUS SYSTEM**

Brain +  
 Compression 2  
 Gliosis  
 Hemorrhage  
 Metaplasia, Lipocyte  
 Peripheral Nerve +  
 Spinal Cord

**RESPIRATORY SYSTEM**

Lung +  
 Hemorrhage 2 2  
 Infiltration Cellular, Histiocyte 3 1 1 1 3 1 1 1 4  
 Inflammation, Chronic 1  
 Metaplasia, Osseous  
 Alveolar Epithelium, Hyperplasia 1 1 2 2 2  
 Nose +  
 Foreign Body X X X X X  
 Inflammation, Chronic 1 1 1

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

males (cont...)

Respiratory Epithelium, Hyperplasia	1						1								1										
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cataract																									
Retina, Degeneration															1										
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia, Focal																								1	

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst			X																						
Hydronephrosis						2																			
Infarct																									
Nephropathy	1	3	2	1	2		2	2	1	2	2	1	2	1	2	2	1	2	1	2	3	1	3	2	1
Renal Tubule, Accumulation, Hyaline Droplet																									
Renal Tubule, Mineralization						2																			
Renal Tubule, Necrosis						1																			
Renal Tubule, Pigmentation							3											2						2	
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6	7	7	7	6	2	6	7	4	6	5	5	7	7	7	6	5	7	6	7	7	5	7	7	5		
	3	3	3	3	8	0	1	1	5	1	9	7	3	2	3	9	2	2	3	2	2	9	3	3	0		
	5	0	0	1	4	8	2	6	0	2	0	2	0	9	0	6	3	9	0	9	9	0	1	1	9		
.....																											
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5		<b>males (cont...)</b>

Hemorrhage 4  
 Inflammation, Acute 3

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 Species/Strain: RATS/F 344

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 Lab: SRI

DAY ON TEST	FISCHER 344 RATS MALE																				* TOTALS				
	ANIMAL ID																								
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7	7	7	6	5	7	7	7	7	7	7	6	6	4	6	7	4	7	6	7	7	7	7	7	7	
3	3	2	5	4	3	3	3	3	3	0	2	7	5	5	2	7	1	8	2	3	3	3	3	3	
1	1	3	3	7	0	0	0	0	0	0	3	7	4	1	6	9	8	1	8	9	1	1	1	1	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	
6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
																							<b>* TOTALS</b>		
Necrosis, Focal																							2 1.0		
Bile Duct, Hyperplasia																							39 2.2		
Centrilobular, Necrosis																							1 1.0		
Hepatocyte, Degeneration																							19 2.3		
Hepatocyte, Hypertrophy																							27 2.6		
Hepatocyte, Vacuolization Cytoplasmic																							1 4.0		
Kupffer Cell, Pigmentation																							3 2.3		
Mesentery																							7		
Accessory Spleen																							1		
Fat, Necrosis																							3 3.0		
Pancreas																							50		
Atrophy																							18 1.8		
Cyst																							14		
Acinus, Cytoplasmic Alteration																							1 3.0		
Acinus, Hyperplasia, Focal																							1 3.0		
Salivary Glands																							50		
Atrophy																							6 1.2		
Stomach, Forestomach																							50		
Edema																							1 2.0		
Ulcer																							1 3.0		
Epithelium, Hyperplasia																							3 1.7		
Stomach, Glandular																							49		
Erosion																							3 2.0		

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 Species/Strain: RATS/F 344

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 Lab: SRI

DAY ON TEST	0 0																								* TOTALS
	7 7 7 6 5 7 7 7 7 7 7 6 6 4 6 7 4 7 6 7 7 7 7 7 7																								
FISCHER 344 RATS MALE 25000 PPM ANIMAL ID	3 3 2 5 4 3 3 3 3 3 0 2 7 5 5 2 7 1 8 2 3 3 3 3 3																								
	1 1 3 3 7 0 0 0 0 0 0 3 7 4 1 6 9 8 1 8 9 1 1 1 1 1																								
	0 0																								
	0 0																								
	1 1																								
	7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9																								
	6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0																								

**CARDIOVASCULAR SYSTEM**

Heart	+ +																								50
Cardiomyopathy	2 2 1 2 3 3 1 1 1 1 2 3 2 2 2 2 1 1 2 3																								36 1.8
Thrombosis	4																								1 4.0

**ENDOCRINE SYSTEM**

Adrenal Cortex	+ +																								50
Accessory Adrenal Cortical Nodule	3 3																								19 3.0
Hyperplasia	2 1 1 2 1																								7 1.4
Hyperplasia, Focal	3																								2 2.0
Hypertrophy, Focal																									1 2.0
Necrosis																									1 3.0
Vacuolization Cytoplasmic, Focal	1 2																								4 1.3
Vacuolization Cytoplasmic, Diffuse																									1 3.0
Adrenal Medulla	+ + + + M + + + + + + + I + + + + + + + + + + + +																								48
Hyperplasia	1 1 2 1																								9 1.2
Islets, Pancreatic	+ +																								50
Parathyroid Gland	+ + + + + + + + + + + + + M + + + + + + + + + + + +																								47
Pituitary Gland	+ +																								50
Pars Distalis, Angiectasis	1 2 2																								5 2.0
Pars Distalis, Cyst	X																								4

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 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	6	5	7	7	7	7	7	6	6	4	6	7	4	7	6	7	7	7	7	7	7	7	
	3	3	2	5	4	3	3	3	3	3	0	2	7	5	5	2	7	1	8	2	3	3	3	3	3	
	1	1	3	3	7	0	0	0	0	0	3	7	4	1	6	9	8	1	8	9	1	1	1	1	1	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
																								<b>* TOTALS</b>		

Pars Distalis, Hyperplasia, Focal																								2	3																								2	3																								1																								10	2.0																																																																																																																																																																																																										
Pars Intermedia, Cyst																																																																																													X	X																								X																								X	5																																																																																																																																																														
Thyroid Gland																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																																																																																																																																																																																																																																																													
Ultimobranchial Cyst																																																																																																																																																																																																																																							1																																																																						
C-cell, Hyperplasia																								2																								1																																																																																																																																											2	6	1.7																																																																																																																
Follicle, Cyst																																																																																																																																																																																																																																																																																					2																								
Follicular Cell, Hyperplasia																																																																																																																																																																																																																																																																																																												1	2.0

**GENERAL BODY SYSTEM**  
 NONE

**GENITAL SYSTEM**

Epididymis																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																																																																																																																																																																																																																																																																																																																																																																																																											
Granuloma Sperm																																																																																																																																																																																																																																																														2	2.5																																																																																																																																																																																											
Inflammation, Chronic																								2																								3																																																																																																																																																																																																																2	2.0																																																																																																																																																																																									
Preputial Gland																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																																																																																																																																																																																																																																																																																																																																																																																																										
Hyperplasia																																																																																																																																																																																																																																																																																																																																			1	2.0																																																																																																																						
Inflammation, Chronic																								2																								2																								2																								2	3																								2																								2	2																																																																																													2	20	2.1																																																																																																																																																																																																									
Prostate																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																																																																																																																																																																																																																																																																																																																																																																																																										
Angiectasis																																																																																																																																																																																																																																																																																																																																																										1	3.0																																																																																															
Inflammation, Acute																																																																																																																																																																																																																																																																																																																																																																																																																																																						1	3.0			
Inflammation, Chronic																								2	4																								3																																																																																																																																																																																																																																																																																																																																																																																																								10	2.4

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 M .. Missing tissue  
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 2) Mild 4) Marked  
 Page 64



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								* TOTALS
	7 7 7 6 5 7 7 7 7 7 7 6 6 4 6 7 4 7 6 7 7 7 7 7 7																								
FISCHER 344 RATS MALE 25000 PPM ANIMAL ID	3 3 2 5 4 3 3 3 3 3 0 2 7 5 5 2 7 1 8 2 3 3 3 3 3																								
	1 1 3 3 7 0 0 0 0 0 3 7 4 1 6 9 8 1 8 9 1 1 1 1 1																								

Seminal Vesicle Inflammation, Chronic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	1	3.0
Testes Germinal Epithelium, Atrophy Interstitial Cell, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	8	2.6
							2												3			4				1	1	1.0

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia Myelofibrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	8	3.0
			3		4								2														3	3.0
Lymph Node Mediastinal, Ectasia Mediastinal, Hemorrhage Mediastinal, Hyperplasia, Lymphoid Mediastinal, Pigmentation Pancreatic, Ectasia Pancreatic, Hemorrhage Pancreatic, Hyperplasia, Lymphoid				+					+	+	+			+		+									+	19	1	3.0
																									3	1	2.0	
																								3	3	2.7		
																									1	2.0		
																									3	3.0		
																									1	1.0		
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	+	M	M	M	M	M	+	M	M	M	M	M	M	M	M	2		
Lymph Node, Mesenteric Atrophy Ectasia Hemorrhage	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	1	2.0
																										2	3.0	
																										4	2	
																									1	1.0		

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 Page 65

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								* TOTALS
	7 7 7 6 5 7 7 7 7 7 7 6 6 4 6 7 4 7 6 7 7 7 7 7																								
FISCHER 344 RATS MALE 25000 PPM ANIMAL ID	3 3 2 5 4 3 3 3 3 3 0 2 7 5 5 2 7 1 8 2 3 3 3 3																								
	1 1 3 3 7 0 0 0 0 0 0 3 7 4 1 6 9 8 1 8 9 1 1 1 1																								

Hyperplasia, Lymphoid	2 2 2																								8 2.1
Spleen	+ +																								50
Fibrosis																									2 2.5
Hematopoietic Cell Proliferation	3 1 3 3 2 1																								11 1.6
Hemorrhage	3																								2 3.0
Hyperplasia, Lymphoid	2																								1 2.0
Necrosis																									1 4.0
Thymus	+ + + + + + + + M + + + + + + + + + + + + + + +																								47
Atrophy																									2 2.5

**INTEGUMENTARY SYSTEM**

Mammary Gland	+ +																								50
Hyperplasia	1 2 3 2																								8 1.9
Skin	+ +																								50
Cyst Epithelial Inclusion																									2
Hyperkeratosis	X																								1 3.0
Ulcer	3																								1 3.0

**MUSCULOSKELETAL SYSTEM**

Bone	+ +																								50
Fracture	X																								1

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0																								
	7	7	7	7	7	7	7	7	6	5	7	6	7	7	7	6	7	7	7	7	7	7	7	7	7
	3	3	3	3	1	3	3	3	9	3	3	1	3	3	3	6	3	3	3	3	3	3	3	3	3
	6	6	6	6	9	1	1	1	0	7	2	1	2	2	2	6	3	3	3	3	3	1	1	1	1
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
Cardiomyopathy	1	1	1	2		1			1	2						2	2	1	1		1				
Inflammation, Chronic																									
Thrombosis																									

females (cont...)

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Accessory Adrenal Cortical Nodule																								
Degeneration, Fatty	1	3		2					1													2		3
Hematopoietic Cell Proliferation																								
Hyperplasia, Focal								1				1							2		3			
Hypertrophy, Focal																								
Necrosis																								
Adrenal Medulla	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia																								
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Pigmentation																								
Pars Distalis, Angiectasis									3															
Pars Distalis, Cyst		X		X		X		X		X	X	X	X	X	X	X	X		X	X		X	X	
Pars Distalis, Hyperplasia, Focal															2				2	2				
Pars Intermedia, Angiectasis																								
Pars Intermedia, Cyst										X							X							

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
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 Lab: SRI

DAY ON TEST	0 0																								
	7 7 7 7 7 7 7 7 6 5 7 6 7 7 7 6 7 7 7 7 7 7 7 7 7																								
FISCHER 344 RATS FEMALE 0 PPM	3 3 3 3 1 3 3 3 9 3 3 1 3 3 3 6 3 3 3 3 3 3 3 3 3																								
	6 6 6 6 9 1 1 1 0 7 2 1 2 2 2 6 3 3 3 3 1 1 1 1 1																								
ANIMAL ID	0 0																								
	0 0																								
	2 2																								
	0 0																								
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																								
	females (cont...)																								
Bone Marrow	+ +																								
Hyperplasia	2																								
Myelofibrosis	2																								
Lymph Node	+ + + +																								
Hemorrhage	3																								
Pigmentation	3																								
Mediastinal, Hematopoietic Cell Proliferation																									
Mediastinal, Hemorrhage	2																								
Mediastinal, Hyperplasia, Lymphoid	2																								
Mediastinal, Pigmentation	1																								
Pancreatic, Hemorrhage	3																								
Lymph Node, Mandibular	M + M M +																								
Lymph Node, Mesenteric	+ +																								
Hemorrhage	1																								
Hyperplasia, Lymphoid	2 2 2 2 2 3 2 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2																								
Spleen	+ +																								
Accessory Spleen	X																								
Hematopoietic Cell Proliferation	2 2 3 1 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2																								
Thymus	+ +																								
Cyst																									

**INTEGUMENTARY SYSTEM**

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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
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 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	7	7	7	7	7	7	6	5	7	6	7	7	7	6	7	7	7	7	7	7	7	7	7	7	
3	3	3	3	1	3	3	3	9	3	3	1	3	3	3	6	3	3	3	3	3	3	3	3	3	3	
6	6	6	6	9	1	1	1	0	7	2	1	2	2	2	6	3	3	3	3	1	1	1	1	1	1	
<hr/>																										
<b>FISCHER 344 RATS FEMALE</b> <b>0 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Mammary Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	2	2	1	2	2	2	2	2	3	3	3	3	2	2	3	1		3	3	1	4	4	3	4	3
Skin Hemorrhage Hyperkeratosis Ulcer Epidermis, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
					2																				

**MUSCULOSKELETAL SYSTEM**

Bone Fracture	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
															X									

**NERVOUS SYSTEM**

Brain Compression Gliosis Hemorrhage Necrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	2				4				4	4								4						
					2						3													
Peripheral Nerve																								
Spinal Cord																								

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

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 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																									
	7	7	7	7	7	7	7	7	6	5	7	6	7	7	7	6	7	7	7	7	7	7	7	7	7	
	3	3	3	3	1	3	3	3	9	3	3	1	3	3	3	6	3	3	3	3	3	3	3	3	3	
	6	6	6	6	9	1	1	1	0	7	2	1	2	2	2	6	3	3	3	3	1	1	1	1	1	
<b>FISCHER 344 RATS FEMALE</b> ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	
<b>0 PPM</b>																										<b>females (cont...)</b>

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Edema																								
Hemorrhage			2							2			2											
Hyperplasia, Lymphoid																								
Infiltration Cellular, Histiocyte	1	1	1	1	1	1	1	1	1	1	1		1		1	1	1	1	1	1	1	1	1	
Inflammation, Chronic	1		1		1	1		1		2		1		1	1	1	1							
Alveolar Epithelium, Hyperplasia	1	1								1							2	3					1	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Foreign Body																						X		
Inflammation, Chronic																								
Respiratory Epithelium, Hyperplasia																								
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cataract																						2	
Retina, Degeneration																						2	
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia, Focal	1																						

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST		0 0																									females (cont...)
		7 7 7 7 7 7 7 7 6 5 7 6 7 7 7 6 7 7 7 7 7 7 7 7 7																									
ANIMAL ID		3 3 3 3 1 3 3 3 9 3 3 1 3 3 3 6 3 3 3 3 3 3 3 3 3																									females (cont...)
		6 6 6 6 9 1 1 1 0 7 2 1 2 2 2 6 3 3 3 3 1 1 1 1 1																									
<b>FISCHER 344 RATS FEMALE</b> <b>0 PPM</b>		0 0																									females (cont...)
		0 0																									
		2 2																									
		0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2																									
		1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																									

**URINARY SYSTEM**

Kidney	+ +																								
Cyst																									
Inflammation, Suppurative																									
Metaplasia, Osseous																									
Nephropathy	1 1																								
Papilla, Necrosis																									
Renal Tubule, Accumulation, Hyaline Droplet																									
Renal Tubule, Necrosis																									
Renal Tubule, Pigmentation																									
Transitional Epithelium, Hyperplasia	2																								
Urinary Bladder	+ +																								
Edema																									
Transitional Epithelium, Hyperplasia																									

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								* TOTALS	
	7	4	7	6	6	7	7	6	7	7	5	6	6	5	7	7	6	7	7	7	7	7	7	7		7
	3	0	1	2	2	3	3	6	3	2	7	8	8	7	0	1	9	3	3	0	3	1	3	3	3	
	3	4	1	7	7	1	1	3	1	3	5	9	2	5	9	6	6	6	6	3	3	1	3	3	3	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	

**ALIMENTARY SYSTEM**

Esophagus	+ +																								49
Intestine Large, Cecum	+ + + + + + + + + + A + A + + + + + + + + + + + + + + + + + +																								48
Edema	3																								1 3.0
Intestine Large, Colon	+ +																								50
Intestine Large, Rectum	+ + + + + I + + + + A + + + + + + + + + + + + + + + + + +																								48
Intestine Small, Duodenum	+ + + + + + + + + + A + + + + + + + + + + + + + + + + + +																								49
Intestine Small, Ileum	+ + A + + + + + + + + A + A + + + + M + + + + + + + + + + + +																								44
Intestine Small, Jejunum	+ + A + + + + + + + + A + A + + + + + + + + + + + + + + + + +																								46
Liver	+ +																								50
Basophilic Focus	X X																								44
Clear Cell Focus																									4
Eosinophilic Focus																									2
Hematopoietic Cell Proliferation																									1 1.0
Hepatodiaphragmatic Nodule																									7
Infiltration Cellular, Mixed Cell	1 X 2 X X																								7 1.9
Mixed Cell Focus																									6
Necrosis, Focal																									1 2.0
Bile Duct, Hyperplasia																									2 3.0

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0																								* TOTALS	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	7	4	7	6	6	7	7	6	7	7	5	6	6	5	7	7	6	7	7	7	7	7	7	7	7	
	3	0	1	2	2	3	3	6	3	2	7	8	8	7	0	1	9	3	3	0	3	1	3	3	3	
	3	4	1	7	7	1	1	3	1	3	5	9	2	5	9	6	6	6	6	3	3	1	3	3	3	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Hyperplasia		4		2					4				3	2		3	3				3				10	2.8
Myelofibrosis																	3								1	3.0
Lymph Node	+		+												+		+							+	9	
Hemorrhage																									1	3.0
Pigmentation																									1	3.0
Mediastinal, Hematopoietic Cell Proliferation																									2	1
Mediastinal, Hemorrhage																									2	2.4
Mediastinal, Hyperplasia, Lymphoid																									2	1.8
Mediastinal, Pigmentation																									2	2.0
Pancreatic, Hemorrhage																									3	3.0
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	2
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Hemorrhage																									2	3
Hyperplasia, Lymphoid																									3	2.2
Spleen	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Accessory Spleen																									2	
Hematopoietic Cell Proliferation																									4	2.4
Thymus	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Cyst										X															1	

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
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 1) Minimal 3) Moderate  
 2) Mild 4) Marked



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								
	7 4 7 6 6 7 7 6 7 7 5 6 6 5 7 7 6 7 7 7 7 7 7 7																								
FISCHER 344 RATS FEMALE 0 PPM ANIMAL ID	3 0 1 2 2 3 3 6 3 2 7 8 8 7 0 1 9 3 3 0 3 1 3 3 3																								
	3 4 1 7 7 1 1 3 1 3 5 9 2 5 9 6 6 6 6 3 3 1 3 3 3																								
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	<b>* TOTALS</b>

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Edema																									<b>1 2.0</b>
Hemorrhage	2																								<b>6 2.2</b>
Hyperplasia, Lymphoid		2																							<b>1 2.0</b>
Infiltration Cellular, Histiocyte					1	1	1	1	1	3		1		2	1	1	1	2	1	1	1	2	1	1	<b>39 1.1</b>
Inflammation, Chronic									1						1	2				1	1			1	<b>18 1.1</b>
Alveolar Epithelium, Hyperplasia																								1	<b>7 1.4</b>
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Foreign Body									X	X															<b>4</b>
Inflammation, Chronic									1																<b>2 1.5</b>
Respiratory Epithelium, Hyperplasia																									<b>1 1.0</b>
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Cataract																									<b>4 2.8</b>
Retina, Degeneration																									<b>4 3.3</b>
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Hyperplasia, Focal																									<b>2 1.0</b>

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 x .. Lesion present  
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 M .. Missing tissue  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	7	7	7	7	7	7	7	5	7	7	7	7	7	7	6	7	5	7	7	7	6	7	7	0	
3	3	3	3	3	3	3	3	3	6	3	3	3	3	3	3	0	2	3	8	3	3	3	4	3	2	
2	2	2	2	2	1	1	1	1	8	1	3	3	3	3	3	9	7	6	9	6	1	1	2	1	6	

**FISCHER 344 RATS FEMALE**  
 3000 PPM

Hepatocyte, Hypertrophy	1	1	1	1						1						2	2	2						
Hepatocyte, Vacuolization Cytoplasmic																2								
Kupffer Cell, Pigmentation																								
Mesentery																								
Accessory Spleen																								
Fat, Necrosis																4	3							2
Pancreas																								
Atrophy																								
Cyst	X				X		X																	
Acinus, Cytoplasmic Alteration																								
Acinus, Hyperplasia, Focal																								
Salivary Glands																								
Stomach, Forestomach																								
Edema																								
Ulcer																								
Epithelium, Hyperplasia																								
Stomach, Glandular																								
Edema																								
Erosion																								

**CARDIOVASCULAR SYSTEM**

Heart																								
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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 + .. Tissue examined microscopically  
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 I .. Insufficient tissue  
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 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	7	7	7	7	7	7	5	7	7	7	7	7	7	7	6	7	5	7	7	7	6	7	7		
3	3	3	3	3	3	3	3	6	3	3	3	3	3	3	0	2	3	8	3	3	3	4	3	2		
2	2	2	2	2	1	1	1	8	1	3	3	3	3	3	9	7	6	9	6	1	1	2	1	6		
.....																										
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7			
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Hyperplasia	1																1				1			
Follicle, Cyst			X																					
Follicular Cell, Hyperplasia												2												

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																							
Hyperplasia																							
Hyperplasia, Focal													3	2					2				
Inflammation, Chronic	2											2											
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst				X								X			X				X				
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Decidual Reaction																							3
Hyperplasia, Cystic			4	1	2					4			1	2						2			
Vagina																						+	+

**HEMATOPOIETIC SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	5	7	7	7	7	7	7	6	7	5	7	7	7	6	7	7		
	3	3	3	3	3	3	3	3	6	3	3	3	3	3	3	0	2	3	8	3	3	3	4	3	2	
	2	2	2	2	2	1	1	1	8	1	3	3	3	3	3	9	7	6	9	6	1	1	2	1	6	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	
Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Hyperplasia									2								4									
Infiltration Cellular, Histiocyte													3													
Myelofibrosis																										
Lymph Node																										
Mediastinal, Hemorrhage																										
Mediastinal, Hyperplasia, Lymphoid																										
Mediastinal, Pigmentation																										
Pancreatic, Hemorrhage																										
Pancreatic, Pigmentation																										
Lymph Node, Mandibular	M	M	M	+	M	M	M	M	M	M	M	M	M	M	+	M	M	M	M	M	M	+	M	M	M	
Ectasia																									3	
Hyperplasia, Lymphoid																									2	
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Hemorrhage																										
Hyperplasia, Lymphoid																									2	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Fibrosis																										
Hematopoietic Cell Proliferation	3	2	2	3	2	2	2	2		3	3		3	1	3	3		3	3	2	2			2		
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Atrophy																										

**INTEGUMENTARY SYSTEM**

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 + .. Tissue examined microscopically  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST																									
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	5	7	7	7	7	7	7	7	6	7	5	7	7	7	6	7	7	
	3	3	3	3	3	3	3	6	3	3	3	3	3	3	0	2	3	8	3	3	3	4	3	2	
	2	2	2	2	2	1	1	1	8	1	3	3	3	3	9	7	6	9	6	1	1	2	1	6	
.....																									
FISCHER 344 RATS FEMALE 3000 PPM	ANIMAL ID																								
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

females  
(cont...)

Mammary Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			1	4	2	2	2	1		2	3	4	1	1	2	3	3	2	3	2	2	2	3	4	4
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

MUSCULOSKELETAL SYSTEM

Bone Osteopetrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-----------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NERVOUS SYSTEM

Brain Compression	+	+	+	+	+	+	+	+	+	+	+	3	+	+	+	+	+	4	4	+	+	+	4	3	4
Peripheral Nerve																									
Spinal Cord																									

RESPIRATORY SYSTEM

Lung Edema Foreign Body	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
 Page 91

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

	DAY ON TEST																										
	0 7 3 2	0 7 3 2	0 7 3 2	0 7 3 2	0 7 3 2	0 7 3 1	0 7 3 1	0 7 3 1	0 7 5 8	0 7 3 1	0 7 3 3	0 7 3 3	0 7 3 3	0 7 3 3	0 7 3 3	0 7 3 3	0 7 3 9	0 7 2 7	0 7 3 8	0 7 3 3	0 7 3 3	0 7 3 4	0 7 3 3	0 7 3 2			
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>3000 PPM</b>	<b>females (cont...)</b>
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5		

Infiltration Cellular, Histiocyte  
 Inflammation, Chronic  
 Metaplasia, Osseous  
 Alveolar Epithelium, Hyperplasia  
 Serosa, Hyperplasia

1		1				1	1	1		1	1	1	1	1	1	1	1	1	1		1	1			1
			1		1	2			1		1	1		1					1		1				1
																	3		1						

Nose  
 Foreign Body

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																X									X

Trachea

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**SPECIAL SENSES SYSTEM**

Eye  
 Cataract  
 Retina, Degeneration

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
						1																			
						2																			

Harderian Gland

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**URINARY SYSTEM**

Kidney  
 Infarct  
 Infiltration Cellular, Mononuclear Cell  
 Nephropathy  
 Renal Tubule, Pigmentation

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		1	1		1	1	1				1	1			1	1	1	1	1			1	1	1	

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 + .. Tissue examined microscopically  
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 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	5	7	7	7	7	7	7	6	7	5	7	7	7	6	7	6	7	7
	3	3	3	3	3	3	3	6	3	3	3	3	3	3	0	2	3	8	3	3	3	4	3	2	
	2	2	2	2	2	1	1	1	8	1	3	3	3	3	9	7	6	9	6	1	1	2	1	6	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

females  
(cont...)

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 I .. Insufficient tissue  
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 Page 93



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								* TOTALS
	7 7 7 7 7 5 6 6 7 7 7 7 6 6 7 7 7 7 6 7 7 7 6 0 3 3 3 3 3 8 4 4 3 3 3 3 3 3 3 3 3 3 5 3 3 3 6 5 2 2 2 2 2 5 7 7 2 2 2 2 9 5 1 1 1 1 3 6 6 6 1 9																								
<b>FISCHER 344 RATS FEMALE</b>	0 0																								
<b>3000 PPM</b>	0 0																								
ANIMAL ID	2 3																								
	7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 0																								
	6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0																								
Hepatocyte, Hypertrophy	1																								10 1.3
Hepatocyte, Vacuolization Cytoplasmic	3																								4 3.0
Kupffer Cell, Pigmentation	2																								2 2.5
Mesentery	+																								7
Accessory Spleen	X																								2
Fat, Necrosis	3																								5 3.0
Pancreas	+																								50
Atrophy	1																								17 1.5
Cyst	X																								10
Acinus, Cytoplasmic Alteration	2																								1 3.0
Acinus, Hyperplasia, Focal	2																								1 2.0
Salivary Glands	+																								50
Stomach, Forestomach	+																								50
Edema	1																								1 4.0
Ulcer	3																								2 3.0
Epithelium, Hyperplasia	3																								2 3.0
Stomach, Glandular	+																								50
Edema	1																								1 2.0
Erosion	1																								2 1.0

**CARDIOVASCULAR SYSTEM**

Heart + 50

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0																								* TOTALS		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
	7	7	7	7	7	7	5	6	6	7	7	7	7	6	6	7	7	7	7	6	7	7	7	6	0		
	3	3	3	3	3	3	8	4	4	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3	6	5	
	2	2	2	2	2	2	5	7	7	2	2	2	2	9	5	1	1	1	1	3	6	6	6	1	9		
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	0	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0		
Cardiomyopathy	1	3		1		1		1		3		2	1		1		1	1			1	1			24	1.3	
Thrombosis														3											1	3.0	

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Accessory Adrenal Cortical Nodule								3							3											3	3.0
Degeneration, Fatty		1	4				2	3												3						15	2.1
Hyperplasia, Focal			3																							6	2.2
Hypertrophy, Focal																										2	2.5
Necrosis																							1			1	1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Hyperplasia													1													2	1.0
Infiltration Cellular, Mononuclear Cell						2																				1	2.0
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Hyperplasia																										1	3.0
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Infiltration Cellular, Mononuclear Cell						3																				1	3.0
Pars Distalis, Angiectasis		2	4										3	2											1	2.1	
Pars Distalis, Cyst		X			X	X	X	X		X		X	X				X	X		X	X		X	X	23		
Pars Distalis, Hyperplasia, Focal					2					1										3					4	2.0	
Pars Intermedia, Angiectasis				4																					1	4.0	

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 2) Mild 4) Marked  
 Page 96



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																								* TOTALS
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	7	7	7	7	5	6	6	7	7	7	7	6	6	7	7	7	7	6	7	7	7	6	0	
3	3	3	3	3	3	8	4	4	3	3	3	3	3	3	3	3	3	3	5	3	3	3	6	5	
2	2	2	2	2	2	5	7	7	2	2	2	2	9	5	1	1	1	1	3	6	6	6	1	9	
.....																									
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	
	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
C-cell, Hyperplasia													2										2		5 1.4
Follicle, Cyst																							X		2
Follicular Cell, Hyperplasia																							2		2 2.0

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Cyst											X												X		2	
Hyperplasia										2				2											2 2.0	
Hyperplasia, Focal									1										2						5 2.0	
Inflammation, Chronic	3						4																		4 2.8	
.....																										
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Cyst																							X		5	
.....																										
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Decidual Reaction																									1 3.0	
Hyperplasia, Cystic																			2		1				9 2.1	
.....																										
Vagina																						+		+	4	

**HEMATOPOIETIC SYSTEM**

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																							* TOTALS							
	7 7 7 7 7 5 6 6 7 7 7 7 6 6 7 7 7 7 6 7 7 7 6 0 3 3 3 3 3 8 4 4 3 3 3 3 3 3 3 3 3 3 5 3 3 3 6 5 2 2 2 2 2 5 7 7 2 2 2 2 9 5 1 1 1 1 3 6 6 6 1 9																														
<b>FISCHER 344 RATS FEMALE</b>	0 0																														
<b>3000 PPM</b>	0 0																														
ANIMAL ID	2 3 7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 0 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0																														
Bone Marrow	+ +																							50							
Hyperplasia																								3	3 3.0						
Infiltration Cellular, Histiocyte																									1 3.0						
Myelofibrosis																								3	1 3.0						
Lymph Node																															
Mediastinal, Hemorrhage																								+ +	7	2 2.5					
Mediastinal, Hyperplasia, Lymphoid																										3 2.7					
Mediastinal, Pigmentation																										3 2.7					
Pancreatic, Hemorrhage																									3	2 2.5					
Pancreatic, Pigmentation																										1 2.0					
Lymph Node, Mandibular	M M																							3							
Ectasia																										1 3.0					
Hyperplasia, Lymphoid																										1 2.0					
Lymph Node, Mesenteric	+ +																							50							
Hemorrhage																										2	1 2.0				
Hyperplasia, Lymphoid																								3	2	2	2	8 2.3			
Spleen	+ +																							50							
Fibrosis																										4	1 4.0				
Hematopoietic Cell Proliferation																								3	3	3 3	2 3 2	2 2 2	3 3 2	2	34 2.5
Thymus	+ +																							50							
Atrophy																										3	1 3.0				

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
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 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								* TOTALS	
	7	7	7	7	7	7	5	6	6	7	7	7	7	6	6	7	7	7	7	6	7	7	7	6		0
	3	3	3	3	3	3	8	4	4	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3	6	5
	2	2	2	2	2	2	5	7	7	2	2	2	2	9	5	1	1	1	1	3	6	6	6	1	9	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>3000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	

Mammary Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
	4	2	2	2	2	4	2	3	3	2	1	3	2	2	2	2	2	2	2	4	2	4	1	3		46 2.4
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49

**MUSCULOSKELETAL SYSTEM**

Bone Osteopetrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
											2															1 2.0

**NERVOUS SYSTEM**

Brain Compression	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
																					2			2			8 3.3
Peripheral Nerve																										2	
Spinal Cord																										2	

**RESPIRATORY SYSTEM**

Lung Edema Foreign Body	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
																											1 2.0
																											1

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	5	7	7	7	6	7	5	7	7	7	7	7	7	7	7	7	0	6	7	7	7	7	7	7
	3	6	3	3	3	6	3	6	3	3	3	3	3	3	3	3	3	1	5	3	3	3	3	3	3
	2	9	2	2	2	6	1	3	1	1	3	3	3	3	3	6	6	3	2	6	6	6	6	6	6
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>9000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

females (cont...)

Pars Distalis, Cyst	X		X	X		X	X	X					X	X	X			X	X	X	X	X		
Pars Distalis, Hyperplasia, Focal	2		1	2															2		2			
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Hyperplasia							2						1			1								1
Follicle, Cyst						X																		

**GENERAL BODY SYSTEM**  
 NONE

**GENITAL SYSTEM**

Clitoral Gland	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																			X					
Hyperplasia, Focal						3				3			2		3									
Inflammation, Chronic																								
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst			X	X						X					X					X				
Corpus Luteum, Vacuolization Cytoplasmic																								
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia, Cystic	1	3										3	3										2	
Inflammation, Suppurative																								
Myometrium, Hypertrophy																								
Vagina																								

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
 Page 105

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	5	7	7	7	6	7	5	7	7	7	7	7	7	7	7	7	0	6	7	7	7	7	7	7	7	7	7	7
	3	6	3	3	3	6	3	6	3	3	3	3	3	3	3	3	3	1	5	3	3	3	3	3	3	3	3	3	
	2	9	2	2	2	6	1	3	1	1	3	3	3	3	3	3	6	6	3	2	6	6	6	6	6	6	6	6	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>9000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5				

females  
(cont...)

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia						2		4										3									
Infiltration Cellular, Histiocyte												2															
Infiltration Cellular, Mixed Cell																											
Lymph Node		+	+					+	+					+					+								
Deep Cervical, Ectasia								4																			
Mediastinal, Hemorrhage		3	2											1				3									
Mediastinal, Hyperplasia, Lymphoid																											
Mediastinal, Pigmentation																											
Lymph Node, Mandibular	M	+	M	M	M	M	M	M	M	M	+	M	M	M	+	M	M	M	M	M	M	M	M	M	M	M	M
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemorrhage												1															
Hyperplasia, Lymphoid		3					2											2									2
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hematopoietic Cell Proliferation	3		2		3	3	2	3		3	2	2		2	2	2	2		4	3	2	2			2	2	
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																											
Hyperplasia, Lymphoid																											

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 + .. Tissue examined microscopically  
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 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	5	7	7	7	6	7	5	7	7	7	7	7	7	7	7	7	0	6	7	7	7	7	7
	3	6	3	3	3	6	3	6	3	3	3	3	3	3	3	3	1	5	3	3	3	3	3	3
	2	9	2	2	2	6	1	3	1	1	3	3	3	3	3	6	6	3	2	6	6	6	6	6
<b>FISCHER 344 RATS FEMALE</b> ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
<b>9000 PPM</b>																								

females (cont...)

Hemorrhage																								2
Infiltration Cellular, Histiocyte	1		1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1		1	1	
Inflammation, Chronic	1					1		2					1		1							1	1	
Metaplasia, Osseous															1									
Alveolar Epithelium, Hyperplasia												1	1											
Serosa, Hyperplasia																	2							
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Foreign Body																								
Inflammation, Chronic																								
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cataract																							
Retina, Degeneration																							
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Zymbal's Gland																							

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																						X	

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 Page 108

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	5	7	7	7	6	7	5	7	7	7	7	7	7	7	7	7	7	7	0	6	7	7	7	7	7	0
3	6	3	3	3	6	3	6	3	3	3	3	3	3	3	3	3	3	3	1	5	3	3	3	3	3	0
2	9	2	2	2	6	1	3	1	1	3	3	3	3	3	3	6	6	3	2	6	6	6	6	6	6	0
.....																										
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>9000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	
.....																										
Inflammation, Suppurative																										
Nephropathy	1	1	1	1	1		1		1				1		1	1	3			1		1	1	1		
Renal Tubule, Accumulation, Hyaline Droplet										2																
Renal Tubule, Pigmentation																						3				
Transitional Epithelium, Hyperplasia																						2				
.....																										
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

Page 109



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0																							* TOTALS	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	7	7	7	7	7	7	7	7	7	7	7	6	7	7	7	7	4	5	7	7	7	7	7	7	
	3	3	3	3	3	3	3	3	3	3	3	6	3	3	3	3	7	6	3	3	3	3	3	3	
	2	2	2	2	2	6	6	6	6	6	2	2	3	2	2	2	4	5	2	2	2	2	2	2	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>9000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
Centrilobular, Necrosis																									1 2.0
Hepatocyte, Degeneration		1	1		1		1	1				2		1				1	1						12 1.1
Hepatocyte, Hypertrophy	2	1	2	2	2	2	2		1		1	1	2		1		1	2	2	2	1	1			27 1.5
Hepatocyte, Vacuolization Cytoplasmic												3													1 3.0
Kupffer Cell, Pigmentation																	2								1 2.0
Mesentery																									
Accessory Spleen																									4
Fat, Necrosis																									2
																									3 2.7
Oral Mucosa																									
Ulcer																									1
																									4
Pancreas																									50
Atrophy		2						3		2		1		2		2									17 1.6
Cyst																									6
Acinus, Hyperplasia, Focal																									2
																									1 2.0
Salivary Glands																									50
Atrophy		1														1									5 1.0
Stomach, Forestomach																									50
Edema																									2
Epithelium, Hyperplasia																									3
																									1 2.0
Stomach, Glandular																									50
Erosion																									1 3.0
Tooth																									1

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 + .. Tissue examined microscopically  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	7	7	1	6	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	5	
2	2	2	2	2	8	3	3	7	3	2	2	2	2	2	3	0	3	3	3	3	3	3	1	4	6	
9	9	9	9	2	4	3	3	5	3	9	9	9	6	9	2	1	2	2	2	2	2	2	6	1	8	
.....																										
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Necrosis, Focal																										1		
Bile Duct, Hyperplasia																												
Hepatocyte, Degeneration	1	2	1				1	2						1	1			1	1			2	2			1		
Hepatocyte, Hypertrophy	2	2	1	1				2	3			2	2	2	2			2	1	2	2	3	1	3	2			2
Hepatocyte, Vacuolization Cytoplasmic																										4		
Kupffer Cell, Pigmentation																										2		
.....																												
Mesentery																												
Accessory Spleen																												
Fat, Necrosis																												
.....																												
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Atrophy	3			1										1			3	2			1			+				
Cyst																										X		
Acinus, Cytoplasmic Alteration																										X		
.....																												
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Atrophy																										3		
.....																												
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Edema																										3		
Ulcer																										3		
Epithelium, Hyperplasia																										1		
																									2			
.....																												
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Erosion																										3		
Ulcer																										3		
.....																												
Tongue																												

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 + .. Tissue examined microscopically  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								
	7 7 7 7 1 6 7 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 6 5																								
FISCHER 344 RATS FEMALE 25000 PPM	2 2 2 2 2 8 3 3 7 3 2 2 2 2 2 3 0 3 3 3 3 3 1 4 6																								
	9 9 9 9 2 4 3 3 5 3 9 9 9 6 9 2 1 2 2 2 2 2 6 1 8																								
ANIMAL ID	0 0																								
	0 0																								
25000 PPM	3 3																								
	5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6																								
ANIMAL ID	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																								
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																								

females (cont...)

Inflammation, Granulomatous

**CARDIOVASCULAR SYSTEM**

Heart	+ +																								
Cardiomyopathy	1 1																								

**ENDOCRINE SYSTEM**

Adrenal Cortex	+ +																								
Accessory Adrenal Cortical Nodule	3 3																								
Angiectasis																									
Degeneration, Fatty	1 1																								
Hyperplasia, Focal	1 1																								
Hypertrophy, Focal	1 1																								
Necrosis	3 3																								
Adrenal Medulla	+ +																								
Hyperplasia	1 1																								
Islets, Pancreatic	+ +																								
Parathyroid Gland	+ +																								
Pituitary Gland	+ +																								
Pars Distalis, Angiectasis	4 3																								
Pars Distalis, Cyst	X X																								

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	7	1	6	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	5
		2	2	2	2	2	8	3	3	7	3	2	2	2	2	2	3	0	3	3	3	3	3	1	4	6
		9	9	9	9	2	4	3	3	5	3	9	9	9	6	9	2	1	2	2	2	2	2	6	1	8
<b>FISCHER 344 RATS FEMALE</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

females  
(cont...)

Pars Distalis, Hyperplasia, Focal					1											2	3			2						
Pars Intermedia, Angiectasis													2				3									
Pars Intermedia, Cyst																										
	X																									
Thyroid Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Hyperplasia					2																		1	1		
Follicle, Cyst																										

**GENERAL BODY SYSTEM**  
 NONE

**GENITAL SYSTEM**

Clitoral Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																										
Inflammation, Chronic																3										
Ovary		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+
Cyst													X	X						X						
Uterus		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																										
Hyperplasia, Cystic		1	1	3			1					3								1			3			
Cervix, Cyst, Squamous																										
Vagina																										+

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
 Page 121

TDMS No. 99007 - 05

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008

Time Report Requested: 08:34:31

First Dose M/F: 04/21/03 / 04/21/03

Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	1	6	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	5	
	2	2	2	2	2	8	3	3	7	3	2	2	2	2	2	3	0	3	3	3	3	3	1	4	6		
	9	9	9	9	2	4	3	3	5	3	9	9	9	6	9	2	1	2	2	2	2	2	6	1	8		
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	<b>females (cont...)</b>	

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia										3															1		
Infiltration Cellular, Histiocyte																								3			
Myelofibrosis									4					2										3			
Lymph Node							+																				
Mediastinal, Hemorrhage																										+	+
Mediastinal, Hyperplasia, Lymphoid																										3	
Mediastinal, Pigmentation																										3	
Pancreatic, Hemorrhage																											
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+
Ectasia																											
Hemorrhage				1		3																					
Hyperplasia, Lymphoid															2		2									2	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosis																											2
Hematopoietic Cell Proliferation	1	2	2	3							2	2	1	1			1	2			2	2	2	3	2	2	1
Hemorrhage																											3
Infiltration Cellular, Mixed Cell																											4
Necrosis																											4
Lymphoid Follicle, Atrophy																											3

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																								
	7 7 7 7 1 6 7 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 6 5																								
2 2 2 2 2 8 3 3 7 3 2 2 2 2 2 3 0 3 3 3 3 3 1 4 6																									
9 9 9 9 2 4 3 3 5 3 9 9 9 6 9 2 1 2 2 2 2 2 6 1 8																									
<b>FISCHER 344 RATS FEMALE</b> ANIMAL ID <b>25000 PPM</b>	0 0																								
	0 0																								
	3 3																								
	5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6																								
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																								

females  
(cont...)

Thymus Atrophy +  
 3

**INTEGUMENTARY SYSTEM**

Mammary Gland Hyperplasia +  
 3 3 2 3 3 3 4 1 4 1 1 2 3 2 4 1 4 +

Skin Edema Hyperkeratosis +  
 4

**MUSCULOSKELETAL SYSTEM**

Bone +

Skeletal Muscle Hemorrhage Inflammation, Suppurative +  
 4

**NERVOUS SYSTEM**

Brain Compression Hemorrhage Necrosis +  
 3 3 1  
 4  
 4

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
**CAS Number: GOLDENSEALRT**

**Date Report Requested: 08/15/2008**  
**Time Report Requested: 08:34:31**  
**First Dose M/F: 04/21/03 / 04/21/03**  
**Lab: SRI**

DAY ON TEST	FISCHER 344 RATS FEMALE																									ANIMAL ID		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
	7	7	7	7	1	6	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	5		
	2	2	2	2	2	8	3	3	7	3	2	2	2	2	2	3	0	3	3	3	3	3	3	1	4	6		
	9	9	9	9	2	4	3	3	5	3	9	9	9	6	9	2	1	2	2	2	2	2	2	6	1	8		

Peripheral Nerve																											
																										+	+
Spinal Cord																											
																										+	+

**RESPIRATORY SYSTEM**

Lung																																																				
																										+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Hemorrhage																										3	3	2	4							3			2	2		3										
Infiltration Cellular, Histiocyte																												1	1		1	1	1		1	1	1		1	1	1	1		2	1			2	2	1		
Inflammation, Chronic																												2					2					1	1					1	2							
Metaplasia, Osseous																																																				
Alveolar Epithelium, Hyperplasia																																1					2															
Serosa, Hyperplasia																															2																					
Nose																																																				
																										+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Foreign Body																																																				
Inflammation, Chronic																																																				
Respiratory Epithelium, Hyperplasia																																																				
Trachea																																																				
																										+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		

**SPECIAL SENSES SYSTEM**

Eye																																																				
																										+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Cataract																																																				
Retina, Degeneration																																																				

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	ANIMAL ID																									females (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	7	7	1	6	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	5	
2	2	2	2	2	8	3	3	7	3	2	2	2	2	2	3	0	3	3	3	3	3	3	1	4	6	
9	9	9	9	2	4	3	3	5	3	9	9	9	6	9	2	1	2	2	2	2	2	2	6	1	8	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Harderian Gland  
 Inflammation, Chronic

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+
															2										2

**URINARY SYSTEM**

Kidney  
 Glomerulosclerosis  
 Nephropathy  
 Renal Tubule, Accumulation, Hyaline Droplet  
 Renal Tubule, Necrosis  
 Renal Tubule, Pigmentation

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2	2		2		1	1		1	2	1	1	1		2	1	1	1	2	1	2	1	1	2	1	
																							3		

Urinary Bladder

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
 Page 125





TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	6	7	7	5	7	7	7	7	6	7	7	7	6	7	7	7	6	7	7
	3	3	1	3	1	3	3	3	7	3	3	6	3	3	3	3	6	3	3	3	8	3	3	3	8	3
	2	2	6	2	8	6	6	6	8	6	2	3	2	2	2	3	3	6	3	3	2	7	2	2	2	2
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	<b>* TOTALS</b>

Inflammation, Granulomatous 4 **1 4.0**

**CARDIOVASCULAR SYSTEM**

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Cardiomyopathy	1				1	1	3							2	1							1				<b>15 1.3</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Accessory Adrenal Cortical Nodule		3																					3			<b>6 3.0</b>
Angiectasis							3																			<b>1 3.0</b>
Degeneration, Fatty							3				3														1	<b>11 2.3</b>
Hyperplasia, Focal											2															<b>5 1.6</b>
Hypertrophy, Focal																							1		1	<b>5 1.4</b>
Necrosis					2																					<b>2 2.5</b>
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Hyperplasia	2					1					1	1	1										1			<b>7 1.1</b>
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Parathyroid Gland	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>46</b>
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Pars Distalis, Angiectasis	3						2																			<b>8 2.1</b>
Pars Distalis, Cyst	X		X					X	X	X		X						X	X							<b>20</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 Page 128  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0 0																									* TOTALS		
	7 7 7 7 7 7 7 7 6 7 7 5 7 7 7 7 6 7 7 7 6 7 7 7 7																											
FISCHER 344 RATS FEMALE 25000 PPM ANIMAL ID	3 3 1 3 1 3 3 3 7 3 3 6 3 3 3 3 6 3 3 3 8 3 3 3 3																											
	2 2 6 2 8 6 6 6 8 6 2 3 2 2 2 3 3 6 3 3 2 7 2 2 2																											
Pars Distalis, Hyperplasia, Focal			1																							9	1.8	
Pars Intermedia, Angiectasis																										2	2.5	
Pars Intermedia, Cyst	X																									2		
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
C-cell, Hyperplasia			1					1																		5	1.2	
Follicle, Cyst												X														1		
<b>GENERAL BODY SYSTEM</b>																												
NONE																												
<b>GENITAL SYSTEM</b>																												
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Cyst																											1	
Inflammation, Chronic												3															2	3.0
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49		
Cyst	X						X	X						X												8		
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Cyst																										1		
Hyperplasia, Cystic	2	3																								13	2.0	
Cervix, Cyst, Squamous			3																							1	3.0	
Vagina																										1		

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
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 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked



TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
 Time Report Requested: 08:34:31  
 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	6	7	7	5	7	7	7	7	6	7	7	7	6	7	7	7	7	7
	3	3	1	3	1	3	3	3	7	3	3	6	3	3	3	3	3	3	6	3	3	3	3	3	3
	2	2	6	2	8	6	6	6	8	6	2	3	2	2	2	3	3	6	3	3	2	7	2	2	2
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
																								<b>* TOTALS</b>	

Thymus Atrophy	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>49</b>	<b>1 3.0</b>
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**INTEGUMENTARY SYSTEM**

Mammary Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>	<b>34 2.6</b>
Skin Edema	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>	<b>1 4.0</b>
Skin Hyperkeratosis																											<b>1 3.0</b>

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>	
Skeletal Muscle Hemorrhage																										<b>2</b>	<b>1 4.0</b>
Skeletal Muscle Inflammation, Suppurative																										<b>4</b>	<b>1 4.0</b>

**NERVOUS SYSTEM**

Brain Compression	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>	<b>8 3.1</b>
Brain Hemorrhage																											<b>2 3.5</b>
Brain Necrosis																											<b>1 4.0</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

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TDMS No. 99007 - 05  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344

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Goldenseal root powder  
 CAS Number: GOLDENSEALRT

Date Report Requested: 08/15/2008  
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 First Dose M/F: 04/21/03 / 04/21/03  
 Lab: SRI

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	6	7	7	5	7	7	7	7	7	6	7	7	7	6	7	7	7	7	
	3	3	1	3	1	3	3	3	7	3	3	6	3	3	3	3	6	3	3	3	8	3	3	3	3	
	2	2	6	2	8	6	6	6	8	6	2	3	2	2	2	3	3	6	3	3	2	7	2	2	2	
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>25000 PPM</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
																									<b>* TOTALS</b>	

Harderian Gland Inflammation, Chronic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>49</b>
																									<b>2 2.0</b>

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>
Glomerulosclerosis												3													<b>1 3.0</b>
Nephropathy	2	1	1		2	2	1	1	1	1	2	2	1	1	1	2	1	1	3	1	1	1	1	1	<b>45 1.4</b>
Renal Tubule, Accumulation, Hyaline Droplet																							2		<b>1 2.0</b>
Renal Tubule, Necrosis									3																<b>1 3.0</b>
Renal Tubule, Pigmentation														2											<b>2 2.5</b>
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>50</b>

\*\*\* END OF REPORT \*\*\*

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 2) Mild 4) Marked  
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